

12 GHz Bias Tee

PSPL5575A Datasheet

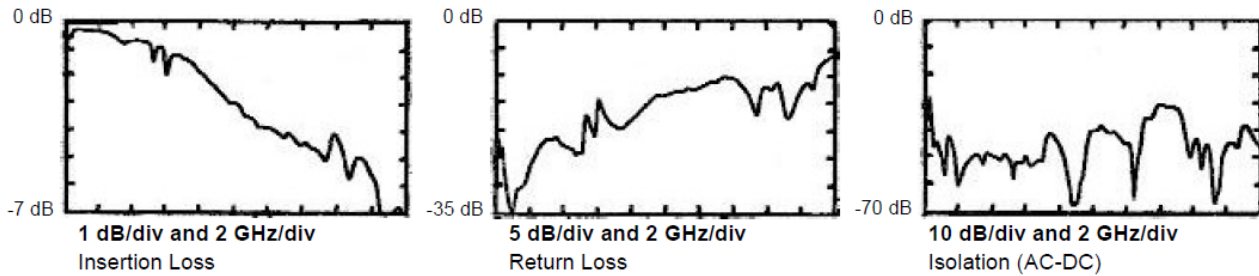


The Model 5575A is a broadband coaxial bias insertion tee and DC blocking capacitor designed to pass fast rise pulses with minimum waveform distortion. The rise time is 30 ps with a -3 dB bandwidth extending from 10 kHz to 12 GHz. The 5575A will safely carry 500 mA of DC current. However, core saturation limits the low frequency response at DC currents above 20 mA.

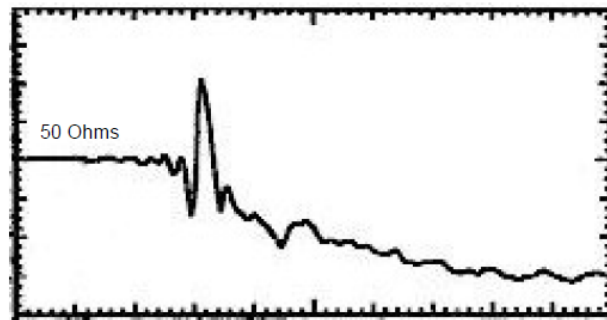
Key performance specifications

- 10 kHz to 12 GHz
- 30 ps rise time
- 50 V, 500 mA

Microwave frequency response



20%/div
Top to bottom: 500 ps/div, 100 ps/div, and 20 ps/div
10 ps Step Response

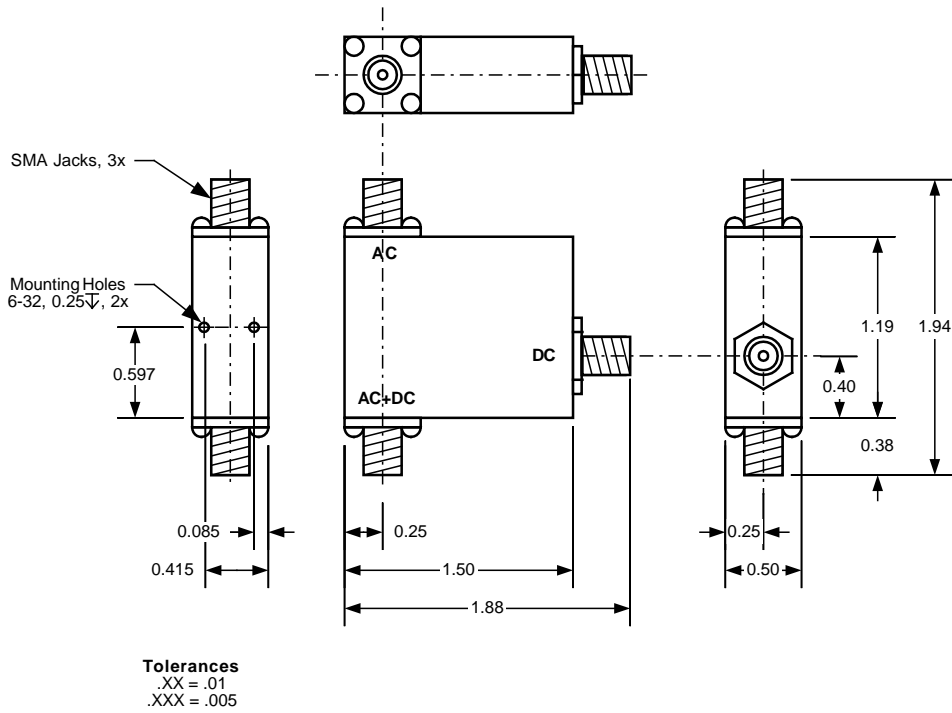


2.5% rho/div and 200 ps/div
35 ps TDR of AC port

Specifications

Parameter	Symbol	Units	Min	Typical	Max	Comments
Impedance	Z	Ohms		50		
Upper 3 dB frequency	$f_{c,h}$	GHz	10	12		
Lower 3 dB frequency	$f_{c,l}$	kHz		10		
Rise time	t_r	ps		30	35	10 – 90%
Insertion loss	S_{21}	dB		0.6		0.01 – 3 GHz +/- 0.5 dB
Input (AC) Return Loss	S_{11}	dB	RL > 18 dB – 1.2 dB / GHz * f(GHz)			0.1 < f < 10 GHz
Refl. Coefficient (35 ps TDR)	Γ	%		+/-5 -6		t < 100 ps t > 100 ps
DC voltage	V	Volts			50	
DC current	I	mA			500	
Capacitance	C	μ F		0.02		- 50%, + 80%
Inductance	L	mH		8		+/- 30%
Resistance	R	Ohm		0.6		
RF power	P	W			3.5	Average power
Isolation	S_{13}	dB		30		
DC path bandwidth	$f_{c,DC}$	kHz		10		
Core Saturation (-3 dB low freq.)	$f_{c,lsat}$	kHz		10 70 300		DC Current < 20 mA 100 mA 500 mA
RF Connectors	SMA jacks (f)					
DC Connector	SMA jack (f)					
Warranty	One Year					

PSPL5575A Mechanical dimensions



Ordering information

Model	Description
PSPL5575A	BIAS TEE, 12GHz, 50V, SMA J-J-J

ASEAN / Australasia (65) 6356 3900

Belgium 00800 2255 4835*

Central East Europe and the Baltics +41 52 675 3777

Finland +41 52 675 3777

Hong Kong 400 820 5835

Japan 81 (3) 6714 3010

Middle East, Asia, and North Africa +41 52 675 3777

People's Republic of China 400 820 5835

Republic of Korea 001 800 8255 2835

Spain 00800 2255 4835*

Taiwan 886 (2) 2722 9622

* European toll-free number. If not accessible, call: +41 52 675 3777

Austria 00800 2255 4835*

Brazil +55 (11) 3759 7627

Central Europe & Greece +41 52 675 3777

France 00800 2255 4835*

India 000 800 650 1835

Luxembourg +41 52 675 3777

The Netherlands 00800 2255 4835*

Poland +41 52 675 3777

Russia & CIS +7 (495) 6647564

Sweden 00800 2255 4835*

United Kingdom & Ireland 00800 2255 4835*

Balkans, Israel, South Africa and other ISE Countries +41 52 675 3777

Canada 1 800 833 9200

Denmark +45 80 88 1401

Germany 00800 2255 4835*

Italy 00800 2255 4835*

Mexico, Central/South America & Caribbean 52 (55) 56 04 50 90

Norway 800 16098

Portugal 80 08 12370

South Africa +41 52 675 3777

Switzerland 00800 2255 4835*

USA 1 800 833 9200

Updated 10 April 2013

For Further Information. Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology.

Please visit www.tektronix.com.

Copyright © Tektronix, Inc. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks, or registered trademarks of their respective companies.

29 May 2014



1PW-30579-0

www.tektronix.com

Tektronix[®]